

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1–8. (cancelled)

9. (previously presented) A process of analyzing a sample of gravitationally separated fractions, comprising:

- a) maintaining the sample in a vertical position;
- b) maintaining the sample in an undisturbed state to maintain the integrity of the gravitationally separated fractions;
- c) providing a horizontally focusing binocular microscope; and
- d) viewing the gravitationally separated fractions of the sample in a vertical and undisturbed state using the horizontally focusing binocular microscope.

10. (new) The process of claim 9, further comprising providing a liquid for immersing the sample prior to viewing the gravitationally separated fractions of the sample, wherein viewing the gravitationally separated fractions of the sample occurs in the liquid.

11. (new) The process of claim 9, wherein the sample comprises drilling cuttings obtained during the drilling of a well in oil and gas exploration.